

Note on Comet α 1888 (Sawerthal). By L. Becker, Ph.D.

(Communicated by Dr. Copeland.)

Along with micrometrical observations of Comet *Sawerthal* with the 15-inch equatorial I have made the following notes on its physical appearance. On May 10 the brightness of the comet was compared in an illuminated field with $\star 9.4$ mag. DM. $+31^\circ$, 4984 and $\star 8.8$ mag. DM. $+31^\circ$, 4982, and found to be of 9.5 mag. It was an easy object for micrometrical measurement. On May 17.6 the comet appeared in feeble reddish field illumination like a bright, pretty large nebula, hardly brighter in the middle. The north preceding tail was traced for about a minute of arc in rather strong twilight.

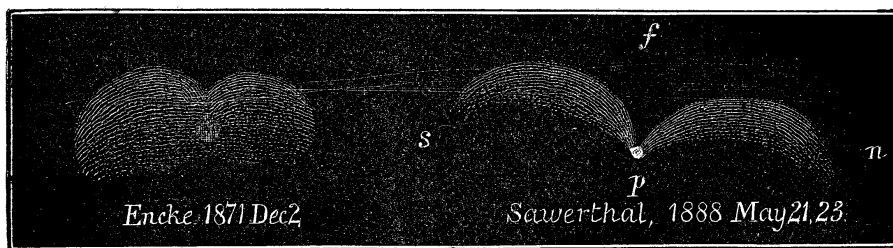
On May 21.5 the remarkable change in the appearance of the comet was first noticed. The nucleus was a well-defined object of a few seconds diameter, from which the matter of the comet appeared to flow out towards the north and south preceding sides, falling over in parabolic curves equally to the north and south. The coma was bounded on the preceding side by two curves of less curvature, extending from the nucleus to the north and south. Both parts of the coma appeared of the same size and their light of equal intensity. There was no trace of the tail on the preceding side seen on May 17. A tangent to the following outline of both parts of the coma was found to be in position angle $0^\circ.8$. The distance from the north to the south end of the coma was measured = $57''.0$ and $59''.5$, both wires of the micrometer being moved in order to obtain unbiased measures free from zero error. In bright field illumination the *nucleus* was estimated 0.1 mag. fainter than $\star 9.0$ mag., DM. 36° , 14, or = 9.1 mag.

On May 23.6 the position-angle of the tangent to the following boundary of the coma was again measured = $5^\circ.8$, $5^\circ.2$, $4^\circ.9$. The distance of the nucleus from this tangent was measured twice, both wires being altered; it was found = $16''.3$ and $16''.5$. In bright field illumination the nucleus appeared 0.3 to 0.5 mag. fainter than $\star 8.7$ mag. DM. $+36^\circ$, 25, therefore *nucleus* = 9.1. Compared with May 21 the coma did not seem to have changed in form but was not so well defined, perhaps on account of the bad state of the atmosphere.

On March 24 it cleared up about 14^h, but owing to the increasing twilight* only a micrometrical connection with a neighbouring star could be secured. The *nucleus* was larger than previously, and appeared decidedly brighter than $\star 9.2$ mag. DM. 37° , 39. Since then the sky has been overcast. It may

* With regard to the brightness of the summer twilight, it may be mentioned that in the latitude of Dun Echt ($+57^\circ 10'$) a short-sighted person can read the preface to the *Nautical Almanac* by the light of the northern sky at midnight on June 21.

perhaps be well to repeat that all the estimates of brightness have been made in an illuminated field.



Lord Crawford's Observatory, Dun Echt:
1888, June 4.

The sketch represents the comet as seen with a power of 240 about 13^h 30^m G.M.T. in twilight without artificial illumination of the field. For the sake of comparison, Prof. A. Hall's drawing of Encke's comet made at Washington in 1871 is reproduced. (Note added July 16, 1888.)

Note on the Glasgow Star Catalogue.
By Professor R. Grant, F.R.S.

It is now five years since the Glasgow Star Catalogue was published, and it is gratifying to me to know that since its first appearance it has been largely used by astronomers in connection with extra-meridional observations of the minor planets and of comets. This circumstance has encouraged me in an endeavour which I formed, shortly after the publication of the Catalogue, to increase its usefulness still further by a reobservation of the stars in the Catalogue, the places of which, when compared with Bessel's places, exhibited larger discordances than can be accounted for by the ordinary errors of observation. The results thus obtained I contemplated incorporating with the earlier results, either in the form of a Supplementary Catalogue or a new edition of the Catalogue itself, unaccompanied, however, by the annual results of the observations, which constituted so large a part of the work published in 1883. The latter is the form which I have decided upon adopting, and the work of the Observatory is now being directed to a scrutiny of the Catalogue and the preparation of the new star places. The auxiliary computations of precession and secular variation are also receiving due attention. The precessions were computed in duplicate and compared, but the secular variations were not computed in duplicate, and errata occur in them which have been pointed out to me by Mr. J. Plummer and others. All the auxiliary computations of the Catalogue are now undergoing a careful revision at the Observatory. My best thanks are due to those astronomers who have kindly made known to me such errata as came